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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/024,222

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Jin Hee Jung

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EXAMINER

FINEMAN, LEE A

ART UNIT

PAPER NUMBER

2872

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

01/12/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/024,222

Applicant(s)

JUNG, JIN HEE

Examiner

Lee Fineman

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 43,44 and 47-62 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 43,44 and 47-62 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 20 December 2006 has been entered. Claims 43, 44 and 47-62 are pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 43-44 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishiguchi, US 6,046,787 in view of Ito et al., US 5,734,416.

Regarding claims 43-44 and 49, Nishiguchi discloses a stereoscopic display device (fig. 5), comprising a display panel (all elements between glass substrates 102a and 102b) having first (103b) and second (103a) pixels for displaying left-eye and right-eye image information respectively (column 15, lines 24-28); a polarizer (102b) on the display panel (fig. 5); a transparent substrate (106a) on the polarizer (see column 17, lines 48-55); and a retardation layer (106) having first (106c) and second (106b) polarizing cell areas corresponding to the first and

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second pixels over the display panel (fig. 5) and, the first and second polarizing cell areas outputting first and second circularly polarized lights, respectively, the circularly polarized light being substantially perpendicular to the second linearly polarized light (column 16, lines 6-24 and lines 48-53), wherein the polarizer, the transparent substrate and the retardation layer are integrally formed as a single unit to be mounted onto the display in a single step (column 17, lines 3-8); wherein the display panel is a liquid crystal display (LCD) panel (column 16, line 17); and wherein the first and second polarizing cell areas are arranged in alternating lines (see fig. 1). Nishiguchi discloses the claimed invention except for the first and second polarizing cell areas outputting first and second linearly polarized lights, the first linearly polarized light being substantially perpendicular to the second linearly polarized light. It is very well known in the art for stereoscopic displays to use either circular or linear polarized light to separate the light into right and left eye channels to provide three-dimensional images. For example, Ito et al. teach a conventional stereoscopic system (fig. 6) using a first linearly polarized light being substantially perpendicular to a second linearly polarized light to provide three-dimensional images (column 1, lines 43-48). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use linearly polarized light as shown by Ito et al. instead of circularly polarized light in the system of Nishiguchi as these types of polarized light perform art recognized equivalent functions in the system.

4. Claims 48, 50, 52-56, 58-60 and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishiguchi in view of Moseley et al., US 6,046,849 and Ito et al.

Regarding claims 52-56, 59 and 62, Nishiguchi further discloses a method for fabricating a stereoscopic display device (figs. 2A-2F and 5) comprising preparing a LCD panel (all

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elements between glass substrates 102a and 102b) having first (103b) and second (103a) pixels for displaying left-eye and right-eye image information respectively (column 15, lines 24-28) eye image information, respectively; and forming a retardation layer (see fig. 2A-2F) having first (12a) and second (12b) polarizing cell areas corresponding to the first and second pixels over the display panel by irradiating a light (fig. 2B1) through a mask (14); and further comprising polymerizing the retardation layer by irradiating a light (column 11, line 20-column 12, line 34). Nishiguchi discloses the claimed invention except for the first and second polarizing cell areas outputting first and second linearly polarized lights, the first linearly polarized light being substantially perpendicular to the second linearly polarized light; and forming the retardation layer by a single light irradiation and wherein forming the retardation layer does not include removing a portion of the retardation layer. It is very well known in the art for stereoscopic displays to use either circular or linear polarized light to separate the light into right and left eye channels to provide three-dimensional images. For example, Ito et al. teach a conventional stereoscopic system (fig. 6) using a first linearly polarized light being substantially perpendicular to a second linearly polarized light to provide three-dimensional images (column 1, lines 43-48). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use linearly polarized light as shown by Ito et al. instead of circularly polarized light in the system of Nishiguchi as these types of polarized light perform art recognized equivalent functions in the system. Further, Moseley et al. teach a polarizer stereoscopic display apparatus (figs. 10-11) comprising a liquid crystal display panel (1), a polarizer (21) and a patterned retarder material (67 in 20 see figs. 17 and 18) wherein the retardation layer (67) is formed by a single light irradiation (figs. 17a-17d) and wherein forming the retardation layer does not include

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removing a portion of the retardation layer (figs. 17a-17d). It would have been obvious to one of ordinary skill in the art at the time the invention was made form the retardation layer of Nishiguchi by the single light irradiation method taught by Moseley et al. as it is a less time consuming method because it has less steps.

Regarding claims 48, 50, 58 and 60, Nishiguchi in view of Ito et al. or Nishiguchi in view of Moseley et al. and Ito et al. as set forth above disclose the claimed invention except for wherein the retardation layer includes a chiral dopant and wherein the first and second polarizing cell areas are arranged in a checkered pattern. Moseley et al. further teach wherein the patterned retarder material (67 in 20 see figs. 17 and 18) containing a chiral dopant for enabling light modulation (column 18, lines 1-7) that is arranged in alternating lines (figs. 17a-17d) or a checkered pattern (figs. 18a-18j). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the retarder material of Nishiguchi in view of Ito et al. or Nishiguchi in view of Moseley et al. and Ito et al. as set forth above include a chiral dopant and being exposed to light so as to be patterned with either alternating lines or a checkered pattern to provide a guiding twisted retarder (column 18, lines 4-6, Moseley).

5. Claim 47 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nishiguchi in view of Ito et al. as applied to claim 43 above, and further in view of Deanne et al., US 6,627,305 B1.

Nishiguchi in view of Ito et al. as applied to claim 43 above discloses the claimed invention except for explicitly stating that the transparent substrate is made from a solvent-proof polymer. Solvent proof polymers such as polyimide are well known in the art for use as

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substrates in liquid crystal systems as evidenced by Deanne (column 1, lines 38-39). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a well-known solvent proof polymer such as polyimide disclosed by Deanne et al. as the material for the transparent substrate of Nishiguchi in view of Ito et al. to reduce the weight of the system (Deanne, column 1, lines 37-38).

6. Claim 57 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nishiguchi in view of Moseley et al. and Ito et al. as applied to claim 56 above and further in view of Deanne et al., US 6,627,305 B1.

Nishiguchi in view of Moseley et al. and Ito et al. as applied to claim 56 above disclose the claimed invention except for explicitly stating that the transparent substrate is made from a solvent-proof polymer. Solvent proof polymers such as polyimide are well known in the art for use as substrates in liquid crystal systems as evidenced by Deanne (column 1, lines 38-39). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a well-known solvent proof polymer such as polyimide disclosed by Deanne et al. as the material for the transparent substrate of Nishiguchi in view of Moseley et al. and Ito et al. to reduce the weight of the system (Deanne, column 1, lines 37-38).

7. Claim 51 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nishiguchi in view of Ito et al. as applied to claim 43 above, and further in view of Franklin et al., EP 0 477 882 A2.

Nishiguchi in view of Ito et al. as applied to claim 43 above discloses the claimed invention except for wherein the retardation layer is covered with a protecting polymer. Franklin et al. discloses a polarizer stereoscopic display apparatus (fig. 1 and fig. 8a) comprising a liquid crystal display panel (12); a polarizer (column 2, lines 8-10 and fig. 8a); and a patterned retarder (22) wherein the patterned retarder is covered with a protecting polymer (column 4, lines 22-24 and fig. 8a). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add a protecting polymer as taught by Franklin et al. to the retardation layer of Nishiguchi in view of Ito et al. to prevent accidental damage to the layer.

8. Claim 61 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nishiguchi in view of Moseley et al. and Ito et al. as applied to claim 53 above and further in view of Franklin et al., EP 0 477 882 A2.

Nishiguchi in view of Moseley et al. and Ito et al. as applied to claim 56 above disclose the claimed invention except for wherein the retardation layer is covered with a protecting polymer. Franklin et al. discloses a polarizer stereoscopic display apparatus (fig. 1 and fig. 8a) comprising a liquid crystal display panel (12); a polarizer (column 2, lines 8-10 and fig. 8a); and a patterned retarder (22) wherein the patterned retarder is covered with a protecting polymer (column 4, lines 22-24 and fig. 8a). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add a protecting polymer as taught by Franklin et al. to the retardation layer of Nishiguchi in view of Moseley et al. and Ito et al. to prevent accidental damage to the layer.

Response to Arguments

9. Applicant's arguments filed 20 December 2006 have been fully considered but they are not persuasive.

Applicant argues that the prior art fails to teach the first linearly polarized light substantially perpendicular to the second linearly polarized light. Applicant states Nishiguchi only discloses that the directions of rotation are different between cells but fails to teach substantially perpendicular. The examiner respectfully disagrees. Nishiguchi teaches the directions of the light of each cell differ by 90-degrees (see column 7 lines 52-55 and column 16, lines 6-12) which is clearly substantially perpendicular. Further when polarized light for each cell is changed from circular to linear the polarization difference between cells is maintained and therefore remains substantially perpendicular.

Conclusion

10. All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lee Fineman whose telephone number is (571) 272-2313. The examiner can normally be reached on Monday - Friday 7:30 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



LAF
5 January 2007


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PRIMARY EXAMINER